

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 June 2006 (01.06.2006)

PCT

(10) International Publication Number
WO 2006/057920 A3

(51) International Patent Classification:
A61B 18/18 (2006.01)

(21) International Application Number:
PCT/US2005/041957

(22) International Filing Date:
18 November 2005 (18.11.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/630,385 22 November 2004 (22.11.2004) US

(71) Applicant (for all designated States except US): **ROX MEDICAL, INC.** [US/US]; 5825 Avenida Encinas, Suite 103, Carlsbad, CA 92008 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BRENNEMAN, Rodney** [US/US]; 34002 Las Palmas Del Mar, San Juan Capistrano, CA 92675 (US). **SCHAEFER, Dean, A.** [US/US]; 29 Aurora, Aliso Viejo, CA 92656 (US). **FLAHERTY, J. Christopher** [US/US]; 242 Ipswich Road, Topsfield, MA 01983 (US).

(74) Agents: **HESLIN, James, M.** et al.; **TOWNSEND AND TOWNSEND AND CREW LLP**, Two Embarcadero Center, 8th Floor, San Francisco, CA 94111-3834 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

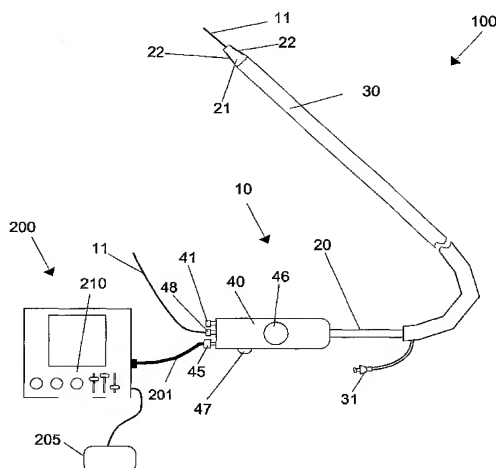
Published:

— with international search report

(88) Date of publication of the international search report:
15 March 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DEVICES, SYSTEMS, AND METHODS FOR ENERGY ASSISTED ARTERIO-VEINUS FISTULA CREATION



(57) Abstract: Devices, systems and methods are disclosed for the formation of an arterio-venous fistula. Embodiments include catheter apparatus including an ablation element for creating and/or modifying the fistula. The devices, systems and methods can be used to treat patients with one or more numerous ailments including chronic obstructive pulmonary disease, congestive heart failure, hypertension, hypotension, respiratory failure, pulmonary arterial hypertension, lung fibrosis and adult respiratory distress syndrome.

WO 2006/057920 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/41957

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **A61B 18/18**(2006.01)

USPC: 606/41

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 606/41; 607/96, 101, 105

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6325798 B1 (EDWARDS et al.) 04 Dec 2001, see entire document	1-94
Y	US 6,503,247 B2 (SWARTZ et al.) 7 Jan 2003, see entire document	95-98



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:		"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

03 April 2006 (03.04.2006)

Date of mailing of the international search report

08 DEC 2006

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (571) 273-3201

Authorized officer

Rosiland S. Rollins

Telephone No. (571) 272-3700